BEFORE THE STATE OF WASHINGTON
ENERGY FACILITY SITE EVALUATION COUNCIL

In the Matter of Application No. 96-1 OLYMPIC PIPE LINE COMPANY CROSS CASCADE PIPELINE PROJECT	)	TESTIMONY OF NICK GILLEN • Alternative Routes • River and Stream Crossings • Wetlands • Land Use and Zoning

1. I, Nick Gillen, am a Senior Ecologist with the King County Department of Development and Environmental Services ("DDES"). In that capacity I am routinely called upon to evaluate whether various development proposals within unincorporated King County are in compliance with County land use and zoning requirements pertaining to wetlands and streams. I am fully familiar with County land use plans and zoning code provisions bearing on the proposed routing of the Cross Cascade Pipeline within King County. I have reviewed the likely wetland and stream crossing impacts of the proposed pipeline route in King County and submit this testimony in support of the County's position that the currently proposed pipeline is not consistent with County land use plans and zoning ordinances, and that compliance with such plans and ordinances should be required as part of any site certification issued for the proposed pipeline project.

2. The documents and activities upon which this testimony is based include, but is not limited to, King County's December 17, 1998 comment letter on the DEIS for the proposed pipeline project; the September 24, 1996 Wetland Report for Proposed Cross Cascade Pipeline Project Volume 1 of 2: Appendices A & B for Snohomish and King County prepared by Dames and Moore; portions of the September 1998 DEIS; the November 20, 1997 draft Land Use Consistency

Determination ("LUCD") prepared by Kate Chaney and addressed to Randy Sandin; the August 25, 1998 Draft Olympic Pipe Line Cross Cascade Pipeline Preliminary Wetland Mitigation Plan; a January 14, 1999 site visit to the stream/wetland crossings on the Tolt River, Cherry Creek, North Fork Cherry Creek, and Harris Creek; a January 29, 1999 site visit with OPL staff/consultants to the Tolt River side channel and an unnamed tributary; a September 30, 1998 aerial fly-over of the King County portion of the proposed route; and a November 22, 1998 meeting with OPL representatives and consultants.

3. Wetlands are productive biological systems that are important in facilitating food chain production, providing habitat for nesting, rearing, and resting sites for aquatic, terrestrial or avian species, maintaining the availability and quality of water such as purifying water, acting as recharge and discharge areas for ground water aquifers and moderating surface water and storm water flows.

4. Twenty-two wetlands have been identified within the portion of pipeline corridor that crosses unincorporated King County that will be directly impacted during construction. These include four Class 1, seventeen Class 2 and one Class 3 wetlands. Six of these wetlands are hydrologically connected to a Class 1 or 2-s stream. OPL proposes to open trench through all of these wetlands to install the pipeline. An estimated 5.65 acres of wetland will be directly impacted during construction. Indirect impacts from such things as water quality degradation, sedimentation, soil compaction, loss of hydrology, loss of buffer or introduction of invasive plant species have not been quantified but mitigation measures for most of these indirect impacts have been included in Appendix C of the DEIS. Areas that are directly impacted will be restored upon completion of construction, however, a 30 foot wide corridor through wetlands and a ten foot wide corridor

through buffers is proposed to be replanted and maintained in low-growing herbaceous plants, but not trees, to allow aerial inspection of the pipeline route. In addition to restoring wetlands, OPL is proposing to compensate for direct wetland impacts by enhancing degraded or low-value wetlands at an off-site location. The compensation rates are described on pages C-28,29 of the DEIS.

5. It is likely that additional wetland and streams that meet King County wetland and stream definitions will be encountered during construction. As an example, during my January 29, 1999 field visit to the proposed Tolt River crossing location, I observed what appears to be a Class 2-s stream tributary to the Tolt River, that is not included in the revised site map atlas, the revised permit application or the DEIS. See Exhibit 1. This tributary will be crossed twice and at least one of the crossings will be open trenched. In addition, the pipeline route parallels the stream corridor for a distance which may require relocation or reconstruction of the stream and a potential loss of a significant amount of stream buffer.

6. The following Comprehensive Plan policies apply to the siting of facilities within or near wetlands:

> **NE-316 King County's overall goal for the protection of wetlands is no net loss of wetland functions or values within each drainage basin. Acquisition, enhancement, regulations, and incentive programs shall be used independently or in combination with one another to protect and enhance wetlands functions Wetland values shall be protected only through acquisition, enhancement and incentive programs.**
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> **NE-317 Development adjacent to wetlands shall be sited such that wetland functions are protected, an adequate buffer around the wetlands is provided, and significant adverse impacts to wetlands are prevented.**

Protecting native species biodiversity depends upon maintaining biological linkages and preventing fragmentation of wetland habitats. Small wetlands strategically located between other wetlands may provide important biological links between other, higher quality wetlands. Wetlands

adjacent to habitat networks also are especially critical to wildlife functions and should receive special consideration.

NE-318 Areas of native vegetation that connect wetland systems should be protected. Whenever effective, incentive programs such as buffer averaging, density credit transfers, or appropriate non-regulatory mechanisms shall be used.

NE-319 The unique hydrologic cycles, soil and water chemistries, and vegetation communities of bogs, fens and other legislatively designated unique wetlands shall be protected through the use of Best Management Practices to control and/or treat stormwater within the wetland watershed.

NE-322 Enhancement or restoration of degraded wetlands may be allowed to maintain or improve wetland functions, provided that all wetland functions are evaluated in a wetland management plan, and adequate monitoring, code enforcement and evaluation is provided and assured by responsible parties. Restoration or enhancement must result in a net improvement to the functions of the wetland system. Technical assistance to small property owners should be considered.

NE-323 Alterations to wetlands may be allowed to:
a. Accomplish a public agency or utility development;
b. Provide necessary utility and road crossings; or
c. Avoid a denial of all reasonable use of the property, provided all wetland functions are evaluated, the least harmful and reasonable alternatives are pursued, and affected significant functions are appropriately mitigated.

NE-325 Wetland mitigation proposals should be approved if they would result in improved overall wetland functions within a drainage basin. All wetland functions should be considered. Mitigation sites should be located strategically to alleviate habitat fragmentation.

NE-326 Mitigation projects should contribute to an existing wetland system or restore an area that was historically a wetland. The goal for these mitigation projects is no net loss of wetland functions per drainage basin.

NE-327 Mitigation sites should replace or augment the functions to be lost as a result of the project proposal. Further, mitigation sites should be located strategically to alleviate habitat fragmentation.

NE-328 Land used for wetland mitigation should be preserved in perpetuity. Monitoring and maintenance should be provided until the success of the site is established.

7. The foregoing Comprehensive Plan provisions for evaluating proposed uses within or near wetlands are implemented by several sensitive area zoning code provisions, which are paraphrased below. King County zoning precludes development from occurring within wetlands except where these minimum requirements are satisfied.

KCC 21A.24.320 – Wetland development standards defined.

KCC 21A.24.330 – List of permitted alterations to wetlands and wetland buffers.
(B) – Special study required (see KCC 21A.24.100, .110, and .120).
(E) – Utilities allowed in wetland buffers if no practical alternatives exist.
– Utilities not allowed within wetlands because not listed as a permitted alteration

KCC 21A.24.350 – Limited exemption for isolated wetlands.

KCC 21A.24.130 – Mitigation Required

KCC 21A.06.750 – Mitigation defined. In descending order of preference, avoidance, minimization, rectification, reduction or elimination over time, compensation by replacing, enhancement, etc, and monitoring.

KCC 21A.24.340(C) –Replacement is required when a wetland or buffer is altered. Restoration of wetlands shall be met by replacement.

KCC 21A.24.340(D) – Enhancement may be allowed, but the wetlands biologic and/or hydrologic functions shall be improved. Minimum requirements established by rule.

KCC 21A.24.340(E) – Minimum standards for mitigation ratios.

KCC 21A.24.340(F) – Off-site mitigation allowed if within the same sub-basin, and greater hydrologic and biologic functions are achieved.

KCC 21A.24.070 – Exceptions to the wetlands standards are allowed if no practical alternative exists with less impact on the sensitive area and the proposal minimizes impacts to sensitive areas.

8. Under these sensitive area zoning regulations, utilities may be allowed in a wetland buffer if there are no practical alternatives to that location, but utilities are not allowed within wetlands themselves. KCC 21A.24.330. Upon carefully evaluating the project, it is evident that the proposal to run the utility pipeline through several wetlands is not consistent with the provisions of the sensitive area zoning regulations. King County's zoning code does, however, allow an applicant to obtain an exception to its sensitive area standards if the applicant can demonstrate that there are no practical alternatives available with less impact on the sensitive area, and that the proposal minimizes impacts on the sensitive area. KCC 21A.24.070. OPL does not qualify for this exception in this case because there are practical alternatives and mitigation options that could minimize impacts, but which OPL has chosen not to adopt.

9. For example, the conclusions that were reached in the DEIS as to the lack of other reasonable alternatives were wrong. There are a number of routing alternatives and construction alternatives that are available. These alternatives are all technically feasible, economically viable, avoid invasive crossings of streams, reduce direct impact to wetlands, and meet the stated purpose and need. See Testimony of Randy Sandin. Because these alternatives will reduce direct impacts to wetlands and avoid invasive crossings of streams without significantly increasing project costs, these alternatives should be adopted by OPL. The following are a few descriptions of sensitive areas where alternatives and additional mitigation options should be employed to avoid unnecessary and significant impacts in wetlands.

10. Stream Crossings #18 and #19, Wetland Crossing 260709 – North Fork Cherry Cr.

The proposed crossing of wetland 260709, North Fork Cherry Creek, lies within a BPA corridor. The wetland and buffer associated with the North Fork of Cherry Creek has been

significantly altered by BPA and possible grazing. The wetland is primarily a reed canarygrass emergent wetland, the buffer area under the BPA line also consists primarily of grasses with some low shrubs. The North Fork of Cherry Creek, which is a class 2-s stream, meanders through the wetland area. Areas just upstream and downstream of the BPA line are densely vegetated. Crossing methods other than open trenching could be used that would have less of an impact to the area.

Stream crossings 18 and 19 and the associated wetlands could be crossed by horizontal, directional drilling ("HDD"). See November 20, 1997 draft LUCD at page 29. This would avoid 0.52 acres of direct wetland impact, 0.28 acres of direct buffer impact and direct impact to two Class 2 streams that are utilized by salmonids. These crossings have been assigned sensitivity ratings of moderate to high. The impact to upland habitat from the drill pits that would be required is minimal since it is all within a maintained BPA right-of-way and outside of wetlands, streams and their buffers. The alternative satisfies all of planning principles used by OPL to evaluate alternatives and by avoiding direct impacts to wetlands and streams, and would be consistent with King County zoning and development regulations. This alternative is not discussed in the DEIS and is not being proposed by the applicant.

11. Stream Crossing #20, Wetland 260716 – Cherry Creek

The main stem of Cherry Creek is a Class 1 stream that flows through a Class 2 forested wetland. The proposed pipeline route is within the BPA corridor that crosses this area. The wetland area under the BPA line has been altered, but it is in relatively good shape. The forested wetland in the area to be crossed consists of dense shrub layer (primarily salmonberry) and several large trees. There is a fourwheel-drive access road just down stream of the proposed crossing that is devoid of vegetation. Open trenching would eliminate the dense shrub layer and would require the removal

several trees. Crossing methods other than open trenching could be used that would have less impact on the sensitive areas. See Testimony of Randy Sandin (discussing alternatives).

12. Stream Crossing #22, Wetland 260727A – Harris Creek

Harris Creek is a Class 2-s stream that flows through a Class 2 wetland. The proposed pipeline route is within the BPA corridor that crosses this area. The wetland area to be impacted consists primarily of scrub-shrub and emergent vegetation. This wetland/stream complex consists of multiple channels that were to deep to cross. Access to the main channel was inhibited by the deep side channels. Open trenching of this area could have a severe adverse impact to this complex wetland/stream eco-system. Other alternatives that would have less of an impact to this system are available. See Testimony of Randy Sandin (discussing alternatives).

13. Stream Crossings #26 and #27, Wetland 250714 – Tolt River

The Tolt river and associated wetland areas are highly complex and in my opinion have not been properly evaluated and or documented. The wetland report indicates and area south of the main channel to be a Palustrine Scrub-Shrub wetland (PSS). This area was investigated on Jan 29, 1999 by King County staff and OPL staff. Historical aerial photos have shown this area to be the original channel. Based on the recent site visit this area is more characteristic of a stream with wetland riparian vegetation. See photos in Exhibit 2. Coho and Steelhead carcasses were observed and photographed during the visit. The carcasses were observed in the area to be crossed. The buffer vegetation located to the south of this side channel consists of mature forest vegetation.

According to the wetland report further south of the side channel is a forested Class 2 wetland to be crossed during the construction of the pipeline. During the field visit a stream was observed within this wetland area. See photos in Exhibit 1. Based on the low gradient and location

of the stream it is highly probable that it is a Class 2-s stream. The origin of this stream is unknown at this time. Because of the poor documentation and lack of information in this area it is difficult to comment on proposed impacts or installation alternatives. However, there appears to be alternative installation procedures/techniques other than open trenching that would have less of an impact to this area. See Testimony of Randy Sandin (discussing alternatives).

The areas mentioned above are located in remote undeveloped areas of KC. The areas around and within the stream/wetlands are densely vegetated with mature forested canopy and undergrowth.

14. In summary, there are a variety of technically feasible, economically viable and practicable options available to OPL to site and construct this project in a manner that would avoid alterations to wetlands and their respective buffers and that would still satisfy the stated purpose and need of this proposal, but at much reduced environmental cost. The specific alternatives to the high impact approach proposed by OPL are set forth in the Testimony of Randy Sandin.

15. This project cannot be deemed consistent with the provisions of King County's land use plans and zoning regulations that regulate the development or siting of a utility facility in or near wetlands. If the project application were amended to conform to the supplemental conditions identified in the other testimony submitted by King County, the mitigation measures summarized in Appendix C of the DEIS, the supplemental mitigation proposed by the DEIS, and to the following wetlands conditions or standards, construction and siting of this project could be consistent with King County wetlands regulations.

16. The wetlands conditions or standards in paragraphs 17 to 31 implement King County's sensitive area zoning regulations and must be complied with in order for a finding of consistency to

be made.

17. The pipeline route shall be located to avoid all Class 1 and open-water or forested Class 2 wetlands. Where avoidance is not possible, Class 1 or open-water or forested Class 2 wetlands shall be crossed by laterally drilling at a minimum depth of four feet below maximum scour depth or by using existing bridges, roads or trails. Bore pits or associated staging areas will be located outside of wetland buffers. Class 2 scrub-shrub wetlands without an open water component or Class 3 wetlands may be open trenched if there is no practical alternative available. Where trenching of wetlands is necessary, the crossing shall be located to minimize impacts to the wetland. Where direct impacts to wetlands and/or their buffers cannot be avoided, and are approved as part of the final construction plans, the impacted area shall be restored, and compensatory mitigation provided, at the following ratios:

> For Class 1 and 2 wetlands – Besides restoring the wetland and buffer, provide compensatory mitigation (replacement or enhancement) at a 2 to 1 ratio.
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> For Class 3 wetlands – Besides restoring the wetland and buffer, provide compensatory mitigation (replacement or enhancement) at a 1 to 1 ratio. For low-value, highly degraded Class 3 wetlands restoration will be credited against these compensatory mitigation standards.

18. Where indirect impacts occur during construction, including such things as water quality degradation, soil compaction, sedimentation, loss of hydrology, or introduction of invasive species, or where approved construction limits are exceeded, the wetlands shall be restored and compensatory mitigation provided at twice the rates specified above.

19. Wetland Mitigation – OPL is proposing to develop a comprehensive mitigation plan for the Washington State Department of Fish and Wildlife's Cherry Valley Wildlife Site to satisfy the compensatory mitigation requirements for direct impacts to wetlands resulting from construction

of the pipeline through King County. This site presents some opportunities to enhance a fairly extensive network of existing wetlands, streams and ponds. The mitigation concept being proposed would increase habitat diversity through plantings and increasing open water, forested and shrub habitat. Slight modifications to topography would be included to improve hydrologic conditions within the wetland. This mitigation strategy is generally acceptable to satisfy King County zoning code requirements. The total acreage to be included in the proposed mitigation plan shall meet or exceed the compensation ratios listed above and the final acreage shall be adjusted for additional impacts that may occur during construction.

20. The pipeline may be placed within a wetland or stream buffer that has been previously developed as a road, trail or other traveled way as long as no additional clearing of the buffer is required. Incidental limbing, trimming or pruning of overstory vegetation that is necessary for the safe operation of equipment is allowed provided that the limbing, trimming or pruning does not impact the overall health of the tree.

21. All wetlands shall be delineated, the boundaries clearly marked in the field and accurately shown on the final construction drawings, prior to construction. To provide base line information to assess damage from future maintenance activities or a product spill, a delineation and function and values analyses shall be completed for each wetland that is located within 100 feet of the pipeline corridor or is within 500 feet downgradient and hydrologically connected to the corridor. This base line information shall be updated every five years.

22. To provide base line data to assess damage from future maintenance activities, and to provide a basis for related mitigation, the applicant shall provide post-project time zero (i.e. “as built”) color print photographs of each stream, river or wetland crossing depicting the crossing from

both sides, and from 100 feet away looking toward the stream or river. This base line photographic information of each crossing shall be updated every five years.

23. Disturbed upland areas adjacent to stream or wetland habitats shall be revegetated to create habitats of comparable or better quality than existing adjacent upland habitats.

24. A detailed, site-specific Final Wetland Restoration/Enhancement Plan shall be prepared in conjunction with development of the final engineering plans. The plan shall include proposed final grades and hydrology, with a detailed planting plan showing plant species, sizes, and locations. A construction sequence, planting schedule, and implementation notes shall be included. The plan shall be prepared in accordance with Department of Ecology's Guidelines for Development of Freshwater Mitigation Plans and shall include a five year monitoring program and contingency plan.

25. No maintenance of vegetation shall occur in wetlands or wetland buffers unless for emergency access for use or maintenance of valves, or where maintenance is already being done with respect to BPA power lines.

26. Snags shall be created, where possible, in the forested habitat within the ROW not impacted by construction to replace snags lost during clearing and to enhance habitat for cavity dwelling species.

27. All sedimentation ponds and biofiltration swales shall be located outside the wetlands.

28. Plant materials for temporary and permanent erosion-sedimentation control in wetland riparian areas and buffers shall be chosen so that they do not compete with the native plant materials existing or proposed for these areas.

29. Straw shall not be placed in wetlands. Jute or coconut (coir) fabric matting shall be used instead of straw until seeds germinate. Coir shall be used on stream banks and slopes greater than 40%.

30. Access roads and staging areas are not allowed within streams and wetlands or their buffers.

31. There shall be no plant height limitation along the pipeline right-of-way, except where overlap occurs with the BPA right-of-way and 5 feet either side of the pipeline centerline.

32. Because OPL has not provided sufficient alternatives analysis, has not selected feasible alternatives that have less impact than its proposed alternatives, has not shown that its project minimized impacts on wetland sensitive areas, and has not amended its application to satisfy these and the other standards and conditions set forth in my testimony, the project cannot be deemed consistent with King County land use plans and zoning ordinance and would not be approved by King County. Any site certification by the Council should at a minimum require compliance with all of these standards and conditions.

DATED this _____ day of _____, 1999

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Nick Gillen